REMARKS

Applicant respectfully requests reconsideration. Claims 1 through 101 were previously pending in this application. Following the amendment, claims 1, 22, 32, 38, 59, 69, 76 and 89 remain as independent claims. No new matter has been added.

Amendments to the Specification

Minor changes have been made throughout the specification, as indicated in the amended paragraphs, above. These changes are to provide consistency of terminology throughout the specification and do not add new matter.

Rejections Under 35 U.S.C. §103

Independent Claims 1 and 38

The Examiner rejected independent claims 1 and 38 based on U.S. Patent 6,031,343 to Recknagel, et al. in view of U.S. Patent 5,646,608 to Shintani. Applicants respectfully disagree.

The references do not establish a *prima facie* case of obviousness for at least two reasons. First, there is no motivation to combine the references. The Examiner asserts the motivation is found in the desire to provide remote control of lights. However, the remote control of Shintani is designed to control devices for which there is no physical connection between the device and the controller. The system of Recknagel includes a physical connection between a central controller and each of the light modules. Thus, there would be no motivation to use the remote control of Shintani in the system of Recknagel.

Second, even if the references were combined, the claimed invention would not result. Both claims 1 and 38 recite a connector providing for two-way data interface that is not shown or suggested in the references. Recknagel shows a bowling center lighting system with one-way data flow. A central controller provides an address, which is received by address modules attached to strings of lights. One of the address modules, in turn, sends an activation signal to an individual light module in a string attached to that address module (see, Abstract). There is no discussion in Recknagel that data passes from a light module back to the controller. To the contrary, a one-way flow of data is apparent from FIG. 1, which has arrows illustrating a one-way data flow from the central controller to the light modules.

Shintani does not teach the limitations of the claims not shown in Recknagel. Shintani describes a remote control that can receive a device identification signal (col. 1, line 49) from a light (col. 3, line 41), but describes no other data provided by a light. The device identification signal is used only to control the display on the remote control (col. 5, lines 24-27) and the remote control of Shintani does not base a lighting control signal on any signal from the light.

Therefore, neither reference teaches or suggests generating a lighting control signal "wherein the addressed lighting control signal is based at least in part on data communicated from the at least one light to the control system over the two-way data interface provided by the connector," as recited in claim 1. As to claim 38, the references do not teach or suggest an "addressed lighting control signal" that "is based at least in part on data communicated from the at least one light to the control system over the two-way data interface provided by the connector."

Independent Claims 22 and 59

The Examiner rejects independent claims 22 and 59 under 35 U.S.C. §103 as being unpatentable over Recknagel in view of U.S. Patent No. 6,508,564 to Kuwabara, et al. Applicants respectfully disagree. The references do not establish a *prima facie* case of obviousness for at least two reasons.

First, there is no motivation to combine the references. Recknagel relates to multi-color lighting in a bowling alley (see Abstract). In contrast, Kuwabara relates to backlighting for a liquid crystal display panel using white light. Because of the differences in structure and function of the lighting systems of the references, one of skill in the art would not expect to find improvements for the system of Recknagel in the teachings of Kuwabara and there is no motivation to combine the references.

Second, even if combined, the references would not teach or suggest all limitations of the claims. Claim 22 recites a method that includes generating a lighting control signal based at least in part of data provided by a light.

As described above in connection with claims 1 and 38, Recknagel shows a bowling center lighting system with one-way data flow and does not describe a lighting control signal based on data provided by a light. Kuwabara does not teach this element either, describing

physical positioning of light sources to suppress chromaticity differences (col. 2, lines 50-65). Kuwabara does not describe generation of a lighting control signal.

Therefore, neither reference teaches or suggests "generating the lighting control signal based at least in part on data provided by the at least one light," as recited in claim 22.

As to claim 59, the references do not teach or suggest a "control system further being configured to generate the lighting control signal based at least in part on data provided by the at least one light."

Therefore, even if combined, the references would not teach or suggest every limitation of the claims.

Independent Claims 32 and 69

The Examiner rejects independent claims 32 and 69 based on Recknagel in view of U.S. Patent 5,086,385 to Launey. Applicants respectfully disagree. The references do not establish a *prima facie* case of obviousness for at least two reasons.

First, there is no motivation to combine the references. The system of Recknagel controls strings of lights, pictured along lanes (see FIGs. 1 and 2) in a bowling alley. Though Launey mentions that *its* automation system could be used in an aircraft, it does not teach or suggest that a bowling alley lighting system as in Recknagel could or should be used in an aircraft and there is no motivation to combine the teachings of these two references.

Second, even if combined, the references would not teach every limitation of the claims. Claim 32 and 69 relate to a method and system, respectively, for lighting an aircraft environment.

Because Recknagel is different in structure and function, the claims recite limitations not shown or suggested in the reference. For example, claim 32 recites "connectors having address facilities proximal lights of the plurality of lights associated therewith." Recknagel shows address modules for light strings near the central controller, not proximal the lights. As described in the present application, this capability provides advantages, such as control over the lighting needed for an aircraft environment (see page 8, lines 6-12) and ease of maintenance (see page 16, lines 13-26).

Further, as recited in claim 32, "at least one light, when connected to the connector, responds to the addressed lighting control signal." The claim also recites attributes of a control

system. Specifically, the claim recites: "configuring the control system to respond to signals from at least one other system of the aircraft environment and to generate the addressed lighting control signal in response to the signals from the at least one other system of the aircraft environment and/or data supplied by the at least one light." A method meeting these limitations is not shown or suggested in the references.

Claim 69 is similar, reciting a system with a "connectors having address facilities proximal lights of the plurality of lights associated therewith." As recited in the claims, "at least one light, when connected to a connector of the plurality of connectors, responds to an addressed lighting control signal of the lighting control signals that is addressed to that connector." Further, claim 69 recites a control system "configured to generate the lighting control signal in response to the signals from the at least one other system of the aircraft environment and/or data supplied by the at least one light." A system meeting these limitations is not shown or suggested in the references.

Independent Claims 76 and 89

Independent claims 76 and 89 are rejected based on Recknagel in view of Shintani and further in view of Kuwabara. Applicants respectfully disagree. The references do not establish a *prima facie* case of obviousness for at least two reasons.

First, there is no motivation to combine the references. Recknagel describes control of light strings in a bowling alley that are connected through a cable to a central controller. Kuwabara relates to back lighting for a liquid crystal display panel using white light. Shintani describes a remote control. There is no reason to use a backlighting system for an LCD panel in a lighting system of a bowling alley or to use a remote control for a system with physical connections. There is also no reason to use a remote control with a back lighting system for an LCD panel. In summary, all three references are directed to different technologies used for different purposes and there is no motivation to combine the references.

Second, even if combined, the references would not meet all limitations of the claims. None of the references describes controlling a non-white color or a color temperature of white light with a control signal generated from data provided through an intelligent connector that provides a two-way data interface, as is described in the present application. Accordingly, each of the claims contains limitations that would not be met, even if the references were combined.

As described above in connection with claims 1 and 38, Recknagel shows a bowling center lighting system with one-way data flow and does not describe a lighting control signal based on data provided by a light. As described above in connection with claims 1 and 38, Shintani describes a remote control, but does not describe that any control of a light is based on a signal from the light. As described above in connection with claims 22 and 59, Kuwabara shows a backlighting arrangement for an LCD, with no data provided by a light and in which control is provided by physical positioning of LEDs, not a control signal.

Therefore, none of the references teaches or suggests the limitations of claim 76 that recite: "a plurality of intelligent connectors" and a plurality of lights, at least one of which is controlled through an intelligent connector. The intelligent connector "provides a two-way data interface between the control system and the at least one light." The system can be controlled so that "the non-white color or a color temperature of the white color generated by the at least one light is determined by mixing particular amounts of the first radiation and the second radiation in response to the lighting data."

Similarly, none of the references teaches or suggests the limitations of claim 89 that recite: "at least one intelligent connector." The intelligent connector provides "a two-way data interface between the at least one light and the control system." The claim also recites that "the control system is configured to control the at least one light via the lighting data to provide illumination including at least one of a white color and a non-white color, and wherein the non-white color or a color temperature of the white color is determined by mixing particular amounts of the first radiation and the second radiation in response to the lighting data." A system meeting these limitations is not shown or suggested in the references.

Summary of Response to 103 Rejections

Each independent claim contains at least one limitation not shown or suggested by the references, whether alone or in combination. Therefore, the rejections of independent claims 1, 22, 32, 38, 59, 69, 76 and 89 should be withdrawn. The remaining claims depend, directly or indirectly, from one of the independent claims. For at least the reasons given in conjunction with the independent claims, the rejections for all of the dependent claims should also be withdrawn.

Accordingly, withdrawal of these rejections is respectfully requested.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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